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Patent

Serial No. 10/522,298

Amendment in Reply to Final Office Action of October 10, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of controlling a disc drive apparatus of a type comprising:

a sledge radially displaceable with respect to an apparatus frame; and

a platform radially displaceable with respect to said sledge;

the method of controlling comprising the acts of:

~~detecting a substantial deceleration or acceleration or~~
stop at least one of a substantial deceleration, acceleration and
stop of the sledge when moving radially;

~~the method of detecting comprising an act of by detecting~~
a radial displacement of said platform with respect to said sledge;
and

controlling the sledge based upon the detecting acts.

2. (Previously Presented) A method according to claim 1, wherein the method of detecting comprises an act of detecting a back-EMF in an electromagnetic device in an actuator for displacing said platform with respect to said sledge.

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3. (Previously Presented) A method according to claim 1, comprising an act of detecting an optical read signal and deriving from the optical read signal an X-displacement signal.

4. (Currently Amended) A method according to claim 1, wherein detecting the ~~substantial deceleration or acceleration or stop~~ at least one of a substantial deceleration, acceleration and stop of said sledge comprises detecting a radial displacement of said platform with respect to said sledge exceeds a predetermined decision threshold.

5. (Previously Presented) A method according to claim 2, comprising an act of detecting an actuator control signal activated to counteract the radial displacement of said platform with respect to said sledge.

6. (Currently Amended) A method according to claim 5, wherein detecting ~~a substantial deceleration or acceleration or stop~~ the at least one of a substantial deceleration, acceleration and stop of said sledge comprises an act of detecting an actuator control signal exceeds a predetermined decision threshold.

7. (Currently Amended) A method for initializing a radial position of an optical lens in a start-up phase of a disc drive apparatus, the method comprising acts of:
 exerting a force on said sledge;

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~~detecting the substantial deceleration or stop at least~~
one of a substantial deceleration, acceleration and stop of the
sledge using the method of detecting according to claim 1; and
stopping said force as soon as a substantial radial
displacement of said platform with respect to said sledge is
detected.

8. (Currently Amended) Disc drive apparatus, comprising:
a radially displaceable scan means, comprising:
a sledge radially displaceable with respect to an
apparatus frame;
a platform radially displaceable with respect to said
sledge;
said apparatus further comprising:
sledge stop detection means for detecting said sledge
coming to a stop;
said sledge stop detection means comprising radial
displacement detection means for detecting a radial displacement of
said platform with respect to said sledge, and
controlling means for controlling the sledge based upon
the radial displacement detection means.

9. (Previously Presented) The apparatus according to claim
8, further comprising:
an electro-motive platform actuator configured to
displace said platform with respect to said sledge;

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wherein said radial displacement detection means are designed to detect a back-EMF in said electro-motive platform actuator.

10. (Previously Presented) The apparatus according to claim 8, further comprising:

an optical system for scanning a disc, the optical system defining an optical path of which at least a part is substantially fixed with respect to said sledge and comprising an optical element which is fixed with respect to said platform;

wherein said radial displacement detection means are designed to detect an optical read signal and to derive from the optical read signal an X-displacement signal.

11. (Currently Amended) The apparatus according to claim 8, wherein said radial displacement detection means are designed to determine that ~~a substantial deceleration or acceleration or stop~~ an at least one of a substantial deceleration, acceleration and stop of the sledge occurs when a detected radial displacement of said platform with respect to said sledge exceeds a predetermined decision threshold.

12. (Previously Presented) The apparatus according to claim 8, further comprising:

a controllable platform actuator associated with said sledge and said platform configured to radially displace said platform with respect to said sledge in response to an actuator control signal;

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a control unit configured to generate a platform control signal for said platform actuator to counteract a radial displacement of said platform with respect to said sledge;

wherein said radial displacement detection means are designed to detect said actuator control signal.

13. (Currently Amended) The apparatus according to claim 12, wherein said radial displacement detection means are designed to determine that ~~a substantial deceleration or acceleration or stop~~ an at least one of a substantial deceleration, acceleration and stop of said sledge occurs when a detected actuator control signal exceeds a predetermined decision threshold.

14. (Previously Presented) Apparatus according to claim 8, further comprising:

a controllable sledge actuator configured to move said sledge radially with respect to said apparatus frame;

a control unit configured to control said sledge actuator;

said control unit configured to respond to said radial displacement detection means to switch off said sledge actuator when said radial displacement detection means indicates that said sledge has come to a stop.

15. (Previously Presented) Apparatus according to claim 14, wherein a displacement range of said sledge with respect to said apparatus frame is restricted by at least one end stop;

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wherein said control unit is designed, in an initializing phase, to energize said sledge actuator such as to move said sledge towards said end stop;

and wherein said control unit is configured to switch off said actuator as soon as said sledge has reached said end stop.